

ABSTRACT

An adjustable stepless hinge shaft comprised of a male shaft tube, a female shaft tube, and an adjustment rod. The male shaft tube consists of a tubular hinge shaft having a mounting section at one extremity; the tubular hinge shaft includes a flange formed along its surface, a tapered hole section at its interior portion, a threaded hole section in its exterior portion, and one or more lengthwise channel on it. The female shaft tube consists of a tubular sleeve and a mounting section; the tubular sleeve includes a columnar bore inside and an annular groove near the entrance of the columnar bore. The adjustment rod consists of a tapered rod and a threaded stud at one extremity. The male shaft tube tubular hinge shaft is inserted into the female shaft tube tubular sleeve and the adjustment rod is then inserted into the male shaft tube tubular hinge shaft or the adjustment rod is first inserted into the male shaft tube tubular hinge shaft and then the tubular hinge shaft is inserted into the female shaft tube tubular sleeve, thereby completing assembly. The overall structure is simple and has few structural components. Furthermore, production and installation is simple and fast, while opening and closing operation is smooth, stable, and durable.